

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Brouwer et al. Conf. No.: 1858
Serial No.: 10/553,553 Group Art Unit: 2872
Filed: 08/21/2006 Examiner: Jennifer A. Doak
For: WING MIRROR UNIT
Docket No.: 065529-0003 Customer No.: 26127

Commissioner for Patents
P.O. Box 1450
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APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

Appellants submit the following Appeal Brief pursuant to 37 C.F.R. § 41.37 for consideration by the Board of Patent Appeals and Interferences. Please charge the cost of filing the opening brief, namely \$510.00, as required under 37 C.F.R. § 1.17(c), to deposit account 04-2223. Further, please charge any additional fees required or credit any overpayment to the same deposit account.

CERTIFICATE OF TRANSMISSION

I hereby certify that this Appeal Brief Pursuant to 37 C.F.R. § 41.37 is, on the date shown below, being transmitted to the U.S. Patent and Trademark Office via the Office's electronic filing system EFS-Web addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: September 17, 2008

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I. REAL PARTY IN INTEREST

Eaton Automotive B.V. is the assignee of all rights in this invention and is the real party in interest.

II. RELATED APPEALS AND INTERFERENCES

Neither Appellants, Appellants' representatives, nor Eaton Automotive B.V. (the assignee) knows of any appeal, interference or judicial proceeding that may be related to, that will directly affect or that will be directly affected by or have a bearing on the Board's decision in the present appeal.

III. STATUS OF CLAIMS

Claims 1-10 have been cancelled. Claims 11-34 are presently pending in this application. Claims 11-23 and 25-33 have been finally rejected, and the rejection of claims 11-23 and 25-33 is being appealed. Claims 24 and 34 have been withdrawn from consideration.

IV. STATUS OF AMENDMENTS

No amendment has been filed subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

This invention relates to a wing mirror unit (Figs. 1-2) for a vehicle.¹ As set forth in independent claim 1, the wing mirror unit (Figs. 1-2) comprises a base plate (2—Figs. 1-2) and a supporting frame (5—Figs. 1-2) pivotally connected to the base plate (2—Figs. 1-2) about a

¹ See Specification at page 1, lines 1-2.

main pivot (4—Figs. 1-2) and an auxiliary pivot (8—Figs. 1-2).² The wing mirror unit (Figs. 1-2) further comprises an actuator including an engaging part connected to the supporting frame (5—Figs. 1-2).³ The actuator (1—Figs. 1-2) is connected to the main pivot (4—Figs. 1-2) and configured to move the main pivot (4—Figs. 1-2) in a linear path further outwardly from the vehicle than the auxiliary pivot (8—Figs. 1-2).⁴ The supporting frame (5—Figs. 1-2) is pivotal with respect to the base plate (2—Figs. 1-2) between a folded orientation in which the supporting frame (5—Figs. 1-2) substantially abuts along a body (3—Figs. 1-2) of the vehicle and an unfolded orientation in which the supporting frame (5—Figs. 1-2) is substantially oriented transversely to the body (3—Figs. 1-2) of the vehicle.⁵ The engaging part is adjustable between a first orientation located near the body (3—Figs. 1-2) of the vehicle and a second orientation located farther outward with respect to the body (3—Figs. 1-2) of the vehicle.⁶

As set forth in independent claim 25, the wing mirror unit (Figs. 1-2) include a base plate (2—Figs. 1-2), a supporting frame (5—Figs. 1-2), a means for pivoting the supporting frame (5—Figs. 1-2) with respect to the base plate (2—Figs. 1-2).⁷ The wing mirror unit (Figs. 1-2) further includes an actuator including an engaging part that operatively engages the supporting frame (5—Figs. 1-2).⁸ The means for pivoting the supporting frame (5—Figs. 1-2) includes a main pivot (4—Figs. 1-2) for pivoting the supporting frame (5—Figs. 1-2) from a folded

² See Specification at page 4, lines 4-8 and 11-14.

³ See Specification at page 4, lines 11-13 and 15-16.

⁴ See Specification at page 4, lines 15-16 and page 6, lines 9-12.

⁵ See Specification at page 4, lines 11-14 and 16-21.

⁶ See Specification at page 4, lines 25-28.

⁷ See Specification at page 4, lines 4-8.

⁸ See Specification at page 4, lines 12-16.

orientation to an unfolded orientation and an auxiliary pivot (8—Figs. 1-2) for pivoting the supporting frame (5—Figs. 1-2) with respect to the base plate (2—Figs. 1-2).⁹ The main pivot (4—Figs. 1-2) is configured to move in a linear path further outwardly from the vehicle than the auxiliary pivot (8—Figs. 1-2).¹⁰

As set forth in independent claim 32, the wing mirror unit (Figs. 1-2) include a body portion (3—Figs. 1-2), a base plate (2—Figs. 1-2) extending from the body portion (3—Figs. 1-2), an actuator including an engaging part, and a supporting frame (5—Figs. 1-2) pivotally connected to the actuator about a main pivot (4—Figs. 1-2) and pivotally connected to the base plate (2—Figs. 1-2) about an auxiliary pivot (8—Figs. 1-2).¹¹ The engaging part supports the main pivot (4—Figs. 1-2) and the position of the main pivot (4—Figs. 1-2) is adjustable inwardly and outwardly with respect to the body (3—Figs. 1-2) of the vehicle such that the main pivot point (4—Figs. 1-2) is configured to move from a position that is closer than the auxiliary pivot (8—Figs. 1-2) to the vehicle¹² to a position that is further outwardly from the vehicle than the auxiliary pivot (8—Figs. 1-2).¹³

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. The rejection of claims 11-23 and 25-33 as unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 5,940,230 (“Crandall”) in view of U.S. Patent No. 4,609,265 (“McKee”).

⁹ See Specification at page 4, lines 6-8 and 12-21 and page 5, lines 8-11.

¹⁰ See Specification at page 6, lines 9-12.

¹¹ See Specification at page 4, lines 4-14.

¹² See Fig. 2.

¹³ See Fig. 1. See Specification at page 4, line 28 to page 5, line 5.

VII. ARGUMENTS

A. Rejection of Claims 11-23 and 25-33

Claims 11-23 and 25-33 stand rejected as being unpatentable under 35 U.S.C. § 103(a) over Crandall (U.S. Patent No. 5,940,230) in view of McKee (U.S. Patent No. 4,609,265). Appellants respectfully submit that the rejection of claims 11-23 and 25-33 under 35 U.S.C. § 103(a) is improper because the claimed invention would not have been obvious to one of ordinary skill in the art and, moreover, the cited references do not disclose or suggest all of the limitations in the claims.

Any obvious determination must be supported by evidence.¹⁴ “The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit.” Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, Federal Register, Vol. 72, No. 195, 57528 (October 10, 2007). The Federal Circuit has also found that even in cases where the prior art is closely analogous to the invention at issue, there must be “objective evidence” of a particular rationale to select and combine the prior art. *In re Lee*, 277 F.3d 1338, 1343-45, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

¹⁴ *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 167 L.E.2d 705, 82 USPQ2d 1385, 1396 (2007) reiterated that the framework for the objective analysis for determining obviousness under 35 U.S.C. § 103 includes the following factual inquires: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the claimed invention and the prior art; and (3) resolving the level of ordinary skill in the pertinent art. Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, Federal Register, Vol. 72, No. 195, 57527 (October 10, 2007).

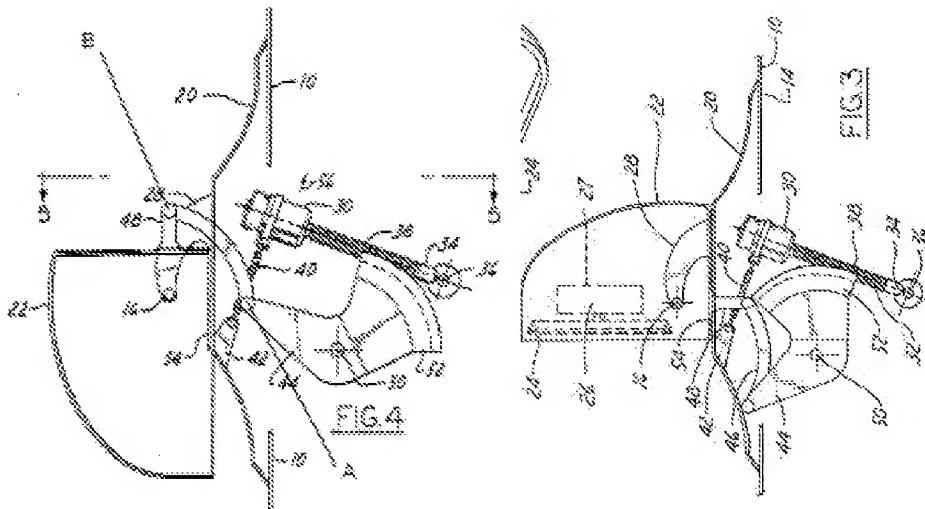
The Office asserts that Crandall teaches the claimed invention, although it expressly acknowledges that Crandall **does not teach that the main pivot moves in a linear path**. Final Office Action mailed February 20, 2008, p. 4.

The Office then asserts that McKee teaches linear translation of a pivot joint (see Fig. 6).

Id. The Examiner simply argues that it would have been obvious to provide the invention of Crandall with linear translation of a joint as in McKee to accommodate a shorter motor shaft for various generic purposes including costs of parts or size accommodation design. *Id.*

However, both Crandall and McKee fail to teach other limitations of the recited claims beyond Crandall's failure to teach that the main pivot moves in a linear path. Among other things, the engaging part of the actuator in Crandall is not adjustable between a first orientation located near the body of the vehicle and a second orientation located farther outward with respect to the body of the vehicle, as explicitly recited in claim 11. Crandall discloses an engaging part comprising a complex arm construction. In Crandall, gear 38 of output shaft 34 and segment gear 52 of pivot gear 44 of coupling mechanism 32 (i.e., structures in Crandall that are identified as an engaging part of the actuator in the Final Office Action mailed February 20, 2008, p. 4) may be adjustable, but at most will lead only to rotational movement via the complex arm construction. The complex arm construction of Crandall simply does not include an engaging part that is adjustable between a first orientation located near the body of the vehicle and a second orientation in which the engaging part and supporting frame is located farther outward, as required in the claims. As shown in Figs. 3-4 of Crandall, the engaging part (identified as structures 38, 52) of the actuator may rotate, but the distance from each structure 38, 52 to the vehicle 10 does not change such that the engaging part is located farther outward.

As acknowledged by the Office, Crandall also fails to teach that the main pivot is configured to move in a linear path further outwardly from the vehicle than the auxiliary pivot. The Office asserts that McKee teaches linear translation of a pivot joint and it would have been obvious to one of ordinary skill in the art to provide a linear translation of the type taught in McKee. However, “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” MPEP § 2143.01 (citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) (where court reversed the rejection holding the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate”). *Id.* Similarly, in the present case, the primary reference relies on movement of link 46 and arm 48 to cause housing 22 to pivot. The main pivot (Examiner Identified element B as shown below) clearly does not, and cannot move linearly based on the link and arm design of Crandall. It would require a substantial reconstruction and redesign of Crandall to provide for linear movement of the main pivot as purportedly taught by McKee.



Furthermore, McKee is directed to rearview mirrors for tractor-trailer combinations that are designed to be controlled in response to a relationship between the vehicle and the trailer being towed by the vehicle. While the Office asserts that it would have been obvious to provide the invention of Crandall with linear translation so as to accommodate a shorter motor shaft, Appellants respectfully submit that this purported motivation or suggestion is not supported. While McKee does utilize linear translation only in its embodiment with a substantially shorter motor shaft (col. 5, lines 28-31, 57-61), such linear translation is not necessarily required nor advantageous with a shorter motor shaft. Rather, a pivoting motion with a curved path may better accommodate a shorter motor shaft, so there is no suggestion or motivation for one of ordinary skill in the art to modify Crandall to utilize linear translation based on the disclosure in McKee for the purpose of accommodating a shorter motor shaft. There can be no suggestion or motivation to modify Crandall for a purpose or function that is already sufficiently met by Crandall.

Independent claims 11, 25, and 32 all recite that “the main pivot is configured to move in a linear path further outwardly from said vehicle than the auxiliary pivot” or substantially similar language thereof. As described, it would not have been obvious to combine the cited references of Crandall and McKee to arrive at the claimed invention because of differences in design and operation. Because the references cited by the Examiner do not disclose or suggest all of the limitations recited in claims 11, 25, and 32, Appellants respectfully submit that the rejection of claims 11, 25, and 32 under 35 U.S.C. § 103(a) is improper. Accordingly, Appellants request that the rejection of claims 11, 25, and 32 under 35 U.S.C. § 103(a) be overturned.

Further, claims 12-23, 26-31, and 33 depend from independent claims 11, 25, and/or 32, and therefore incorporate all of the limitations recited in independent claims 11, 25, and/or 32.

For the reasons stated hereinabove, therefore, Appellants submit that the rejection of claims 12-23, 26-31, and 33 under 35 U.S.C. § 103(a) is improper and requests that the rejection be overturned.

B. Rejection of Claims 17-18

Claims 17-18 depend from independent claim 11 and therefore incorporate all of the limitations recited in claim 11. For the reasons stated hereinabove in Section VII.A, therefore, Appellants submit that the rejection of claims 17-18 under 35 U.S.C. § 103(a) is improper and requests that the rejection be overturned. Appellants further submit that claims 17-18 recite patentable subject matter apart from their dependence on claim 11.

The Office acknowledges that the combination of Crandall and McKee fails to disclose that the actuator is a linear actuator including a driving arm, nor that the driving arm (44, 46, 48, 38, 52) form the engaging part (38, 52), but that it would have been obvious to use a linear actuator in the Crandall mirror system since it is an art recognized equivalent of the motor driving system.

“In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant’s disclosure or the mere fact that the components at issue are functional or mechanical equivalents.” MPEP § 2144.06 (citing *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958)). Appellants respectfully submit that the Office has provided no evidence that the equivalency is recognized in the art. To the extent that the equivalency is merely based on the fact that a linear actuator including a driving arm is purported to be functionally equivalent to the pivot gear and segment gear actuator of Crandall, this is improper and further evidence is necessary to support the asserted equivalency. None of the cited references teach or disclose a linear actuator including a driving

arm in which the driving arm forms the engaging part, as recited in the claims, and the Office has presented no evidence of equivalency.

Because the references cited by the Examiner do not disclose or suggest all of the limitations recited in claims 17-18, Appellants respectfully submit that the rejection of claims 17-18 under 35 U.S.C. § 103(a) is improper. Accordingly, Appellants request that the rejection of claims 17-18 under 35 U.S.C. § 103(a) be overturned.

C. Rejection of Claim 19

Claim 19 depends from independent claim 11 and therefore incorporates all of the limitations recited in claim 11. For the reasons stated hereinabove in Section VII.A, therefore, Appellants submit that the rejection of claim 19 under 35 U.S.C. § 103(a) is improper and requests that the rejection be overturned. Appellants further submit that claim 19 recites patentable subject matter apart from its dependence on claim 11.

Dependent claim 19 further recites a wing mirror unit “wherein the auxiliary pivot is disconnectably anchored or attached to the base plate or the supporting frame.” In contrast, Crandall at most teaches or discloses only that the auxiliary pivot (Examiner identified element A) remain disconnected to the base plate or supporting frame, either when folded or unfolded. The secondary reference, McKee, also fails to teach or disclose this limitation.

Because the references cited by the Examiner do not disclose or suggest all of the limitations recited in claim 19, Appellants respectfully submit that the rejection of claim 19 under 35 U.S.C. § 103(a) is improper. Accordingly, Appellants request that the rejection of claim 19 under 35 U.S.C. § 103(a) be overturned.

Respectfully submitted,

Date: September 17, 2008

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VIII. CLAIMS APPENDIX

11. A wing mirror unit for a vehicle, comprising:
 - a base plate;
 - a supporting frame pivotally connected to the base plate about a main pivot and an auxiliary pivot; and
 - an actuator including an engaging part connected to the supporting frame, the actuator being connected to the main pivot and configured to move the main pivot in a linear path further outwardly from said vehicle than the auxiliary pivot;
 - wherein the supporting frame is pivotal with respect to the base plate between a folded orientation, in which the supporting frame substantially abuts along a body of said vehicle, and an unfolded orientation, in which the supporting frame is substantially oriented transversely to the body of said vehicle; and
 - further wherein the engaging part is adjustable between a first orientation located near the body of said vehicle and a second orientation located farther outward with respect the body of said vehicle.
12. The wing mirror unit according to claim 11, wherein the main pivot is configured for pivoting the supporting frame from the unfolded orientation to an emergency folded orientation.
13. The wing mirror unit according to claim 12, wherein the main pivot is adjustable transversely to the body of said vehicle between the first orientation and the second orientation.
14. The wing mirror unit according to claim 12, wherein the engaging part supports the main pivot.
15. The wing mirror unit according to claim 11, wherein the actuator is an electric actuator.
16. The wing mirror unit according to claim 11, wherein the actuator adjusts the engaging part towards and away from the base plate.
17. The wing mirror unit according to claim 11, wherein the actuator is a linear actuator including a driving arm.

18. The wing mirror unit according to claim 17, wherein the driving arm forms the engaging part.
19. The wing mirror unit according to claim 11, wherein the auxiliary pivot is disconnectably anchored or attached to the base plate or the supporting frame.
20. The wing mirror unit according to claim 19, wherein the supporting frame pivots around the auxiliary pivot with respect to the base plate when the actuator adjusts between the folded orientation and the unfolded orientation.
21. The wing mirror unit according to claim 11, wherein the engaging part is configured with play with respect to the actuator.
22. The wing mirror unit according to claim 21, wherein the engaging part, to overcome a dead center during an adjustment, can pivot.
23. The wing mirror unit according to claim 11, wherein the actuator includes a driving arm.
25. A wing mirror assembly for a vehicle comprising:
 - a base plate;
 - a supporting frame;
 - a means for pivoting the supporting frame with respect to the base plate; and
 - an actuator including an engaging part that operatively engages the supporting frame;wherein the means for pivoting the supporting frame includes a main pivot for pivoting the supporting frame from a folded orientation to an unfolded orientation, an auxiliary pivot for pivoting the supporting frame with respect to the base plate, and the main pivot is configured to move in a linear path further outwardly from said vehicle than the auxiliary pivot.
26. The wing mirror assembly according to claim 25, wherein the engaging part is adjustable between a first orientation located near a body of said vehicle and a second orientation located transversely outwardly with respect to the body of said vehicle.

27. The wing mirror assembly according to claim 26, wherein the main pivot is adjustable transversely with respect to the vehicle between the first orientation and the second orientation.

28. The wing mirror assembly according to claim 25, wherein the engaging part supports the main pivot.

29. The wing mirror assembly according to claim 28, wherein the actuator adjusts the main pivot towards and away from the base plate.

30. The wing mirror assembly according to claim 25, wherein the actuator is a linear actuator including a driving arm, and wherein the driving arm forms the engaging part.

31. The wing mirror assembly according to claim 21, wherein the engaging part is configured with play with respect to the actuator.

32. A wing mirror system for a vehicle comprising:
a body portion;
a base plate extending from the body portion;
an actuator including an engaging part;
a supporting frame pivotally connected to the actuator about a main pivot and pivotally connected to the base plate about an auxiliary pivot;
wherein the engaging part supports the main pivot and the position of the main pivot is adjustable inwardly and outwardly with respect to the body of said vehicle such that the main pivot point is configured to move from a position that is closer than the auxiliary pivot to said vehicle to a position that is further outwardly from said vehicle than the auxiliary pivot.

33. The wing mirror system according to claim 32, wherein the supporting frame is pivotal with respect to the base plate between a folded orientation, in which the supporting frame substantially abuts along the body of said vehicle, and an unfolded orientation, in which the supporting frame is substantially oriented transversely to the body of said vehicle.

IX. EVIDENCE APPENDIX

[NONE]

X. RELATED PROCEEDINGS APPENDIX

[NONE]

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